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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARK L. LA FOREST,
CHRISTOPHER S. WAHLERS,
and ROGER W. HOLLOWAY

Appeal 2008-3931
Application 10/783,548
Technology Center 1700

Decided: December 9, 2008

Before BRADLEY R. GARRIS, CATHERINE Q. TIMM, and
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 7-14 and 16-19. We have jurisdiction under 35 U.S.C. § 6.

We AFFIRM the Examiner's decision for the reasons expressed in the Answer and below.

Statement of the Case

Appellants claim a rapid resin or pitch transfer molding process comprising the steps of arranging a porous preform 18 in an annular mold cavity having a top half and a bottom half, wherein a plurality of melt supply channels 41, 43 is disposed in the top half end and the bottom half of the mold, effecting the flow of the resin or pitch from the channels through the body of the preform to vents 22 in order to effect impregnation of the preform, and cooling then removing the impregnated preform from the mold (Fig. 5B; claim 7). Appellants also claim such a process wherein the cooling steps are effected by a flash cooling system (claim 19).

Representative independent claims 7 and 19 read as follows:

7. A rapid resin or pitch transfer molding process, comprising the steps of:

arranging a porous preform, at a temperature above a melting point of a resin or pitch to be transferred into the preform, in an annular mold cavity defined by a top half that includes an annular groove and a bottom half that includes an annular groove opposed to the top half annular groove, so that the top half and the bottom half annular grooves together form said annular mold cavity, wherein a plurality of melt supply channels is disposed in the top half and in the bottom half of the mold to operatively communicate with said annular mold cavity, wherein valves are operated to admit resin or pitch into the melt supply channels in the top half and the bottom half of the mold, and wherein said annular mold cavity is provided with an arrangement for venting and/or providing a vacuum thereto;

effecting flow of the resin or pitch from channels located in the top and bottom of the mold cavity through the body of the preform located in the mold cavity to vents located in the center of, at the top and/or bottom of, and/or annularly around the mold cavity, in order to effect impregnation of the preform;

cooling the resulting resin-infiltrated or pitch-infiltrated preform to below the melting point of the resin or pitch; and

removing the impregnated preform from the mold.

19. A rapid resin or pitch transfer molding process, comprising the steps of:

arranging a porous preform, at a temperature above a melting point of a resin or pitch to be transferred into the preform, in an annular mold cavity defined by a top half that includes an annular groove and a bottom half that includes an annular groove opposed to the top half annular groove, so that the top half and the bottom half annular grooves together form said annular mold cavity, wherein a plurality of melt supply channels is disposed in the top half and in the bottom half of the mold to operatively communicate with said annular mold cavity, wherein valves are operated to admit resin or pitch into the melt supply channels in the top half and the bottom half of the mold, and wherein said annular mold cavity is provided with an arrangement for venting and/or providing a vacuum thereto;

effecting flow of the resin or pitch from channels located in the top and bottom of the mold cavity through the body of the preform located in the mold cavity to vents located in the center of, at the top and/or bottom of, and/or annularly around the mold cavity, in order to effect impregnation of the preform;

cooling the resulting resin-infiltrated or pitch-infiltrated preform to below the melting point of the resin or pitch by an air, water, or mist flash cooling system; and

removing the impregnated preform from the mold.

The Examiner has made the following rejections under the judicially created doctrine of obviousness-type double patenting:

claims 7-14 and 16-18 are rejected over claims 5-17 of La Forest (US 7,025,913 B2);

claims 7-14 and 16-18 are rejected over claims 1-20 of Wood (US 6,537,470 B1) in view of Johnson (US 5,045,251); and

claim 19 is rejected (i) over claims 5-17 of La Forest in view of Barron (US 6,030,575) or Gautier (US 5,567,509) and (ii) over claims 1-20 of Wood in view of Johnson and further in view of Barron or Gautier.

The Examiner also has made the following rejections under 35 U.S.C. § 103(a):

claims 7-14 and 16-18 are rejected over either Wood (US 6,537,470 B1) or Wood (WO 02/18120 A2)¹ in view of Johnson; and

claim 19 is rejected over Wood (i.e., US '470 or WO '120) in view of Johnson and further in view of Barron or Gautier.

THE OBVIOUSNESS-TYPE DOUBLE PATENTING REJECTION BASED ON CLAIMS 5-17 OF LA FOREST

Issue

Have Appellants identified with reasonable specificity any error in this rejection?

Findings of Fact

The Examiner finds that claims 5 and 6 of La Forest define Appellants' claim 7 process in all respects except for the requirement that the mold cavity be annular (Ans. 5). This finding has not been disputed by Appellants.

¹ The Examiner has determined that the two Wood references (US '470 and WO '120) "contain the same relevant subject matter" (Ans. ¶ bridging 9-10), and Appellants do not contend otherwise. Accordingly, like the Examiner (*id.*), the remainder of this opinion will use the name "Wood" as a referral to both of these references and will cite to the disclosure of US '470 in discussing the teachings of these references.

Based on this finding, the Examiner concludes that "the selection of the shape of the mold cavity would have been readily chosen by and obvious to the ordinarily skilled artisan in order to achieve the production of an intended product" (*id.*).

Principles of Law

"The judicially-created doctrine of obviousness-type double patenting cements that legislative limitation [i.e., the duration of a patentee's right to exclude others from practicing a claimed invention pursuant to 35 U.S.C. § 154 (a)(2)] by prohibiting a party from obtaining an extension of the right to exclude through claims in a later patent that are not patentably distinct from claims in a commonly owned earlier patent." *Eli Lilly and Co. v. Barr Labs. Inc.*, 251 F.3d 955, 967 (Fed. Cir. 2001).

Analysis

Appellants argue that "[t]he Examiner has not demonstrated—on pages 4-5 of the Final Rejection or elsewhere—that the presently claimed process differs from the process of claims 5-17 of La Forest by only obvious differences" (App. Br. 7). This argument constitutes a mere allegation that the rejection is improper without reasonably specifying any error therein. Therefore, the argument is unpersuasive.

Conclusion of Law

Appellants have failed to identify with any reasonable specificity error on the Examiner's part in making the rejection under review.

For this reason, we sustain the obviousness-type double patenting rejection of claims 7-14 and 16-18 as being unpatentable over claims 5-17 of La Forest.

**THE OBVIOUSNESS-TYPE DOUBLE PATENTING REJECTION
BASED ON CLAIMS 1-20 OF WOOD US '470 IN VIEW OF
JOHNSON AND THE § 103 REJECTION BASED ON WOOD IN
VIEW OF JOHNSON**

Issue

Have Appellants identified and established error in the Examiner's conclusion that Johnson would have suggested providing a plurality of melt supply channels in the top and bottom mold halves of the process defined by claims 1-20 of Wood US '470 or the process disclosed in Wood (i.e., US '470 or WO '120)?

Findings of Fact

The Examiner finds that the process claimed by Wood US '470 and disclosed by Wood corresponds to Appellants' claim 7 process in all respects except for the requirement "wherein a plurality of melt supply channels is disposed in the top half and in the bottom half of the mold to operatively communicate with said annular mold cavity" (claim 7) (Ans. 4, 6-7, 10-13, 14). The Examiner also finds that Johnson teaches at lines 52-54 in column 1 "Due to the rapid resin cure, flow distances are limited and for longer flow distances multiple inlet ports may be required" and further teaches at lines 64-67 in column 6 "It will be apparent that the number and placement of the resin-in and air-out passages will be a matter within the ability of those skilled in the art of resin transfer molding given the present disclosure" (*id.*, especially at 12). These findings have not been contested by Appellants in the record of this appeal.

Based on these findings, the Examiner concludes that it would have been obvious to provide the top and bottom mold halves in the process

disclosed and claimed by Wood with a plurality of melt supply channels in view of Johnson (*id.*).

Principles of Law

"[A] double patenting of the obviousness type rejection is "analogous to [a failure to meet] the non-obviousness requirement of 35 U.S.C. § 103," except that the patent principally underlying the double patenting rejection is not considered prior art." *In re Longi*, 759 F.2d 887, 892 n.4 (Fed. Cir. 1985) (*quoting In re Braithwaite*, 379 F.2d 594, 600 n. 4 (CCPA 1967)).

When the question is whether a claim to a combination of prior art elements is obvious under 35 U.S.C. § 103, "a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions." *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740 (2007).

"[T]he analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.*, 127 S. Ct. at 1741.

Analysis

For each of the rejections under consideration, Appellants argue that the Examiner has failed to explain how Johnson's column 1 disclosure would have made it obvious to modify the process claimed and disclosed by Wood in the manner proposed by the Examiner and required by appealed claim 7 (App. Br. 4-6; Reply Br. 1-2). This argument is unpersuasive for a number of reasons.

First, contrary to Appellants' contention, the Examiner has provided a detailed explanation as to why the disclosure in column 1 (as well as in

column 6) of Johnson would have suggested the modification in question (*see, e.g.*, Ans. 10-13). Second, Appellants' argument does not even acknowledge the Examiner's reliance on the column 6 disclosure of Johnson much less explain why this column 6 disclosure does not support the Examiner's conclusion of obviousness.

On the other hand, this obviousness conclusion is supported by the fact that the use of plural melt supply channels was known in the prior art and by the fact that this prior art feature is predictably used according to its established function in the combination proposed by the Examiner. While Johnson admittedly does not precisely teach disposing plural melt supply channels in top and bottom mold halves specifically, the inferences and creative steps that an artisan would employ upon review of Johnson's disclosure would have led to the above-discussed modification proposed by the Examiner.

Conclusion of Law

Appellants have failed to identify and establish error in the Examiner's conclusion that Johnson would have suggested providing a plurality of melt supply channels in the top and bottom mold halves of the process disclosed and claimed by Wood.

It follows that we sustain the rejections of claims 7-14 and 16-18 under obviousness-type double patenting based on claims 1-20 of Wood '470 in view of Johnson and under 35 U.S.C. § 103 based on the disclosure of Wood (*i.e.*, US '470 or WO '120) in view of Johnson.

**THE ABOVE DISCUSSED REJECTIONS UNDER OBVIOUSNESS-
TYPE DOUBLE PATENTING AND UNDER § 103 BASED ON THE
ADDITIONALLY APPLIED REFERENCES TO BARRON OR
GAUTIER**

Findings of Fact

In addition to the findings discussed above, the Examiner finds that the claims and disclosure of Wood as well as the claims of La Forest fail to disclose the claim 19 step of cooling "by an air, water, or mist flash cooling system" (Ans. 5, 6, 8-9).

Concerning this claim limitation, the Examiner also finds that Barron discloses a molding process which includes a rapid cooling step effected by air flow (col. 8, ll. 58-62) and that Gautier teaches a molding process which includes a cooling step effected by vacuum (i.e., air flow caused by a vacuum) (col. 5, ll. 5-13) (Ans. 5, 6, 8-9).

Based on these findings, the Examiner concludes that it would have been obvious for one with ordinary skill in this art to provide the molding processes disclosed and claimed by Wood or claimed by La Forest with a cooling step effected by an air flash cooling system in view of Barron or Gautier (*id.*).

Issue

Have Appellants established any difference between the claim 19 step of cooling by an air flash cooling system and the cooling steps taught by Barron or Gautier?

Principles of Law

See the legal principles discussed above.

Analysis

In addition to the unsuccessful arguments previously discussed, Appellants acknowledge the cooling step disclosures of Barron and Gautier but question "How is this a teaching of 'flash cooling'?" (App. Br. 5; *see also* 7-8). However, Appellants have not specifically identified any difference between the claim 19 cooling step and the cooling steps disclosed by Barron and Gautier. On the record of this appeal, these claimed and prior art cooling steps are indistinguishable as correctly observed by the Examiner (Ans. 14).

Conclusion of Law

Appellants have not established any difference between the claim 19 step of cooling by an air flash cooling system and the steps disclosed by Barron and Gautier of cooling by an air cooling system.

Therefore, we sustain the rejections of claim 19 based on obviousness-type patenting and based on 35 U.S.C. § 103 (i) over the claims and disclosure of Wood in view of Johnson and further in view of Barron and Gautier and (ii) over the claims of La Forest in view of Barron or Gautier.

SUMMARY

We have sustained each of the rejections advanced by the Examiner in this appeal.

Order

The decision of the Examiner is affirmed.

Appeal 2008-3931
Application 10/783,548

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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